WHAT IS CLAIMED IS:

1. A DC-AC converter comprising:

a transformer having a primary winding with a center tap, and at least one secondary winding, in which the center tap is connected to a first potential point of a DC power source;

a first semiconductor switch which is connected between one end of the primary winding and a second potential point of the DC power source and causes an electric current to flow through the primary winding in a first direction;

a second semiconductor switch which is connected between the other end of the primary winding and the second potential point and causes an electric current to flow through the primary winding in a second direction;

a first capacitor and a third semiconductor switch, which are connected in series between the other end of the primary winding and the center tap;

a second capacitor and a fourth semiconductor switch, which are connected in series between the one end of the primary winding and the center tap;

a current detection circuit to be used for detecting an electric current which flows into a load connected to the secondary winding;

a pulse width modulation circuit which produces a pulse width modulation signal by comparing a feedback signal formed on the basis of an electric current detected by the current detection circuit with a triangular wave signal train; and

a logic circuit to be used for outputting a switch drive signal and which produces, on the basis of the pulse width modulation signal, a first switch drive signal to be used for turning on the first semiconductor switch, a second switch drive signal to be used for turning on the second semiconductor switch, a third switch drive signal to be used for turning on the third semiconductor switch, and a fourth switch drive signal to be used for turning on the fourth semiconductor switch, wherein

the first through fourth switch drive signals are produced at timings of an off-state period where the first through fourth semiconductor switches are turned off, said timings being produced during interval periods such that a first semiconductor switch group, comprising the first semiconductor switch and the third semiconductor switch, and a second semiconductor switch group, comprising the second semiconductor switch and the fourth semiconductor switch, are alternately made on-state synchronously with triangular wave signals of the triangular wave signal train.

2. The DC-AC converter according to claim 1, wherein the first and third semiconductor switches are turned on at every other peak of the triangular wave signal of the triangular wave signal train and remain on-sate until an immediately-subsequent triangular wave signal becomes equal to the feedback signal; and further wherein

the second and fourth semiconductor switches are turned on at every other peak of the triangular wave

signal of the triangular wave signal train, which is different from that of being generated when the first and third semiconductor switches are turned on, and remain on-state until an immediately-subsequent triangular wave signal becomes equal to the feedback signal.

3. The DC-AC converter according to claim 1, wherein the first semiconductor switch is turned on at every other peak of the triangular wave signal of the triangular wave signal train and remains on-state until an immediately-subsequent triangular wave signal becomes equal to the feedback signal;

the second semiconductor switch is turned on at every other peak of the triangular wave signal of the triangular wave signal train, which is different from that of being generated when the first semiconductor switch is turned on, and remains on-state until an immediately-subsequent triangular wave signal becomes equal to the feedback signal;

the third semiconductor switch is turned on at a timing before the first semiconductor switch is turned on, but after lapse of a predetermined period of time since the second semiconductor switch completes the on-sate period thereof and remains on-state during a period in which the first semiconductor switch remains on-state; and

the fourth semiconductor switch is turned-on at a timing before the second semiconductor switch is turned on, but after lapse of a predetermined period of time since the first semiconductor switch completes

the on-state period thereof and remains on-state during a period in which the second semiconductor switch remains on-state.

4. The DC-AC converter according to any one of claims 1 through 3, wherein the first through fourth semiconductor switches are MOS field-effect transistors.

5. The DC-AC converter according to any one of claims 1 through 4, wherein a burst control signal in the form of a pulse train, which allows a ratio of on-state period and off-state period to be controlled, whereby the first through fourth switch drive signals can be produced or stopped.

6. An AC power supply method for supplying AC power into which a power supply voltage of a DC power source is converted, to a load connected to a secondary winding of a transformer, the transformer having a primary winding with a center tap, and at least one secondary winding, the method comprising the operations of:

connecting the center tap to a first potential point of the DC power source;

connecting a first semiconductor switch for causing an electric current to flow through the primary winding in a first direction between one end of the primary winding and a second potential point of the DC power source;

connecting a second semiconductor switch for

causing an electric current to flow through the primary winding in a second direction between the other end of the primary winding and the second potential point of the DC power source;

connecting a first capacitor and a third semiconductor switch in series between the other end of the primary winding and the center tap;

connecting a second capacitor and a fourth semiconductor switch in series between the one end of the primary winding and the center tap;

detecting an electric current flowing through the load connected to the secondary winding by means of a current detection circuit;

producing a feedback signal on the basis of the electric current detected by the current detection circuit and comparing the feedback signal with a triangular wave signal train, thereby producing a pulse width modulation signal; and

producing, on the basis of the pulse width modulation signal, a first switch drive signal to be used for turning on the first semiconductor switch, a second switch drive signal to be used for turning on the second semiconductor switch, a third switch drive signal to be used for turning on the third semiconductor switch, and a fourth switch drive signal to be used for turning on the fourth semiconductor switch; whereby

producing the first through fourth switch drive signals at timings of an off-state period where the first through fourth semiconductor switches are turned off, said timings being produced during interval

periods such that a first semiconductor switch group, comprising the first semiconductor switch and the third semiconductor switch, and a second semiconductor switch group, comprising the second semiconductor switch and the fourth semiconductor switch, are alternately made on-sate synchronously with triangular wave signals of the triangular wave signal train .